UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,130	03/22/2005	Naoyuki Takano	JCLA12006	2576

23900 7590 12/20/2007

J C PATENTS, INC.
4 VENTURE, SUITE 250
IRVINE, CA 92618

EXAMINER	
DOUGLAS, STEVEN O	
ART UNIT	**PAPER NUMBER**
3771	
MAIL DATE	**DELIVERY MODE**
12/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/529,130	TAKANO ET AL.	
	Examiner	Art Unit	
	/Steven O. Douglas/	3771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4,5,7 and 9* is/are rejected.

7)☒ Claim(s) *6,8 and 10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4,5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pevzner'000 in view of Barclay'232.

The Pevzner reference discloses a hydrogen gas (i.e. cryogen-type) compression system comprising a source of hydrogen gas 10 having a gas feed line 18 with a modulating valve (unnumbered) that leads to the lower side of a heat exchanger 25 that is filled with liquid hydrogen from the source 10, wherein the gas is allowed to percolate up through the liquid hydrogen in the heat exchanger and hence cool the gas being feed to the compressor stages (30,36) and ultimately the gas feed outlets (44,46). Furthermore, a trim heater/cooler 40 (i.e. a broadly disclosed *"heat exchanger")* is provided to further heat or cool the gas flowing through the gas feed outlets (45,46) if needed. All functional and statements of intended use have been carefully considered but are deemed not to impose any structure on the claims distinguishable over the Pevzner reference which is most certainly capable of being used to fill a fuel cell associated with a gas powered automobile. However, the Pevzner'000 reference fails to disclose the broadly disclosed heat exchanger as being one which utilizes a liquid inert gas (i.e. that does

not mix with the gas being supplied) as its heating/cooling medium. The Barclay reference discloses another cryogen-type gas delivery system comprising heat exchangers (26,36) that utilizes the liquid form of the cryogen gas being supplied as its heating and cooling medium to cool and/or heat the gas being supplied. It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute a heat exchanger system (i.e. one that utilizes the liquid form of the cryogen gas being supplied as its heating and cooling medium) as, for example, disclosed by Barclay for the broadly disclosed heat exchanger of Pevzner.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pevzner'000 in view of Barclay'232 as applied to claims 4,5 and 7 above and further in view of White'924.

The Pevzner reference discloses a hydrogen gas compression system (supra) that has an inherent method of operation, but does not disclose the system as being explicitly used for filling an automobile fuel tank or cell. The White reference discloses another hydrogen gas compression system configured to be used in filling fuel cells or tanks of alternative fuel vehicles. It would have been obvious to one of ordinary skill in the art at the time the invention was made to configure the Pevzner device to fill the fuel cell or tank of an alternative fuel automobile in view of the implied teachings of the White reference to accommodate the filling of such alternate fuel-type vehicles.

Response to Arguments

Applicant's arguments filed 11/2/07 have been fully considered but they are not persuasive. In regard to Applicant's repeated argument that the Barclay'232 reference is not

combinable with the Pevzner reference under 35 USC 103(a) because the liquid cryogen gas utilized in the Barclay heat exchangers has a lower boiling point compared to the liquid inert gas utilized by the present invention, Examiner disagrees. Examiner does acknowledge that the boiling points of the liquid inert gas in the current invention is higher than the boiling point of the liquid cryogen gas utilized in the Barclay device. However, Examiner has merely relied upon the Barclay reference to show that liquid cryogen gases utilized in the heat exchanger systems is conventionally known in gas delivery systems and to choose a type of cryogen gas that would be suitable for use with the Pevzner delivery system for Hydrogen (i.e. be it Nitrogen, Argon or any other suitable liquid cryogen gas) is well within the expected skill of an ordinary artisan and would lead to a reasonable anticipated success. See KSR International Co. v. Teleflex Inc., 550 U.S. -, 82 USPQ 2d 1385 (2007) for further support of Examiner's position.

Claims 6,8 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Steven O. Douglas/ whose telephone number is (571) 272-4885. The examiner can normally be reached on Mon-Thurs 6:30-5:00.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven O. Douglas/
Primary Examiner
Art Unit 3771

SD
12/17/07